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# Knowledge

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# THE *lion* WARRIORS

**Africa's lions are killed in their thousands for taking cattle. But a collaboration between conservationists and Samburu warriors is preventing the predation and saving the big cats' lives, says Joanna Eede**

Photos by James Warwick

**S**ome years ago, conservation biologist Alayne Oriol Cotterill was tracking on foot a radio-collared lion through miombo woodland in Zimbabwe. The GPS signal was weakening, suggesting that the cat was moving away. So Alayne broke into a sprint and, having scrambled through a dense thicket, burst into a grassy clearing.

The first thing Alayne saw at her feet was a bright red ribcage – the fresh carcass of a kudu, a big antelope. The next was several lionesses, crouched over their kill. They looked up at her, startled. Alayne backed away slowly, her heart thumping furiously. The big cats didn't move.

The experience taught her something about lions: for all their power and majesty, they are surprisingly cautious. Alayne didn't run for her life, like normal prey – she seemed confident. "I didn't trigger the lions' hunting

response," she says. "They just seemed amazed that I had jumped straight into their dinner."

Scientists have long underestimated the effect of fear on lions. "The lion is usually thought of as a top predator, inducing fear in others, not subject to fear of predation itself," says Alayne. But her recent research with Oxford University's Wildlife Conservation Research Unit (WildCRU) demonstrates just how people induce fear in lions, and how the carnivores are adjusting their behaviour to avoid being killed. However, the cats' efforts are not enough: *Panthera leo* is dying at an unsustainable rate.

Humans have shared their homelands with lions for millennia. They were still widespread across sub-Saharan Africa at the time of the first western settlers. But a 1975 estimate by the IUCN put wild numbers at approximately 200,000, and today there are believed to be fewer than 35,000. Worst of all, the consensus is that lion numbers are in freefall.

The primary cause is the rapid growth in the human population. ►



The Warrior Watch project in Kenya teaches Samburu how to read, as well as track lions by GPS





Grass-roots projects in East Africa involve local people in lion conservation. "We have lived with lions forever and want that to continue," says Lpuresi Lenawasai, a Samburu warrior



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Above: a male and female lion patrol Maasai Mara National Reserve in Kenya.

Right: Ewaso Lions' Shivani Bhalla trains Samburu warriors as lion conservationists

As Craig Packer, the world's leading lion expert, says: "Human population growth in rural African areas has more than quadrupled in the past 40 years, and is due to quadruple again." The boom has reduced lions' traditional habitat and brought them into close contact with people, as swaths of land are settled or converted to agriculture.

### Claws out for cattle

Across the savannah, traditional lion prey such as zebra or gazelle is being wiped out by what Will Travers, CEO of the Born Free Foundation, describes as "industrial-scale levels of illegal commercial bushmeat trade". A hungry lion targets cattle; the lion is in turn speared, shot or even poisoned by livestock owners in what have become known as retaliatory killings. Unsustainable trophy hunting and the trade in lion body parts for traditional medicine also impact on numbers. In Kenya alone, an average of 100 lions a year are being lost, from a population of only 2,000.

After leaving Zimbabwe, the British-born, Nairobi-based Alayne worked with the organisation Living with Lions in a project to monitor the cats across Laikipia District. This area includes Borana, a privately owned cattle ranch and wildlife conservancy. Thirty years ago lions were seen as vermin, and controlled much as foxes are in the UK. As the decline in wildlife became apparent, several ranches in Laikipia began to explore ways in which wildlife and ranching could co-exist; Borana was at the forefront of this change.

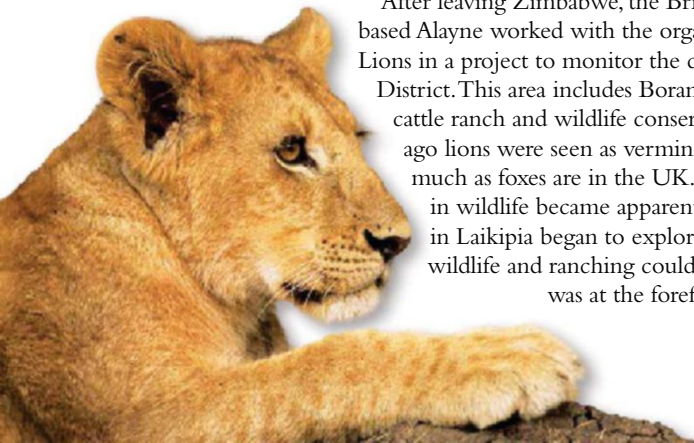


"Commercial ranches in Laikipia are now acting like national parks in terms of providing sanctuary for lions. They are hugely important for lion numbers," says Michael Dyer, Borana's owner.

To monitor lions, an adult lioness and the pride male are each fitted with a collar that emits a location signal. If the lions move near cattle, the shepherd is swiftly alerted. The cattle are kept safe, and the lions stay alive: a win-win situation. "Collars also indicate the high-risk areas in which to avoid keeping cattle at night," Alayne says. "Lions are opportunists," Michael confirms. "If livestock aren't looked after properly, they will be targeted."

I meet Alayne when she visits Borana to help a team

A lion cub: Kenya alone is losing about 100 lions a year – faster than the population is able to grow







Alayne measures the teeth of a tranquilised adult male (the same cat as shown on p37). The canines can be 6cm long

collar a lioness. On our search for the cat we bump across the conservancy's basalt hills late one afternoon, past herds of African buffalo, their ears back-lit by the lowering equatorial sun, and a cheetah calling to her young cubs on a golden plain of red-oat grass. But our target proves elusive. As the sky turns lilac over the snowy peaks of Mount Kenya, we park under a stand of yellow fever trees and, in an attempt to lure the lions through the dusk, play a CD recording of a buffalo calf in distress.

### Looking for lions

A new moon rises over the Arijiju hills, and a nightjar trills from afar. But the lions don't show. So just after dawn the next day we fly over the ranch in a bid to spot them from the air. Egyptian geese flock in the first light of day; elephants drink at a water hole. In the distance I can see the blue hills of the Matthews Range, and beyond to the vast arid lands of northern Kenya. Then Michael catches sight of the pride moving through thick bush.

By the time we have landed and driven to the location, we find a young lioness sunning herself on a rock. The collaring team fire a pink-feathered syringe from a dart gun. It whistles through the air then sinks into her golden flank. She swivels in alarm, jumps down from her rock and bolts into long grass – ears flat, shoulders rolling, on high alert. ►

**“Lion numbers are in freefall... In Kenya alone, 100 lions a year are being lost, from a population of only 2,000”**

## WARRIOR WATCH: GRASS-ROOTS CONSERVATION

Biologist Shivani Bhalla founded Ewaso Lions to explore ways of mitigating conflict with big cats, and its Warrior Watch project is the first in northern Kenya to involve warriors in wildlife conservation. Samburu tribesmen receive training in ecology, collecting data and using GPS trackers – in the photograph below, Shivani is measuring a sedated lioness that is about to be given a collar. The tribesmen are also taught how to read and write. Another programme, Lion Watch, teaches local safari guides how to identify individual lions, and encourages visiting tourists to upload lion photos to an online database.



Shivani x2: Ewaso Lions



## FACT FILE

AFRICAN  
LION*Panthera leo*

**WEIGHT** Adult male: 150–240kg;  
adult female: 122–182kg.

**LENGTH** Adult male: 1.7–2.5m;  
adult female: 1.6–1.9m.

**ID TIPS** Unmistakable. Large, muscular  
tawny cat; male develops a shaggy mane.

**DIET** Medium-sized and large mammals,  
such as antelope, wildebeest, buffalo and  
zebra; also takes prey as small as rodents.

**HABITAT** Savannah, open woodland,  
thick brush, scrub and desert.

**LIFE-CYCLE** The only social cat, forming  
prides, usually of four to six adults plus  
young; dispersing males form coalitions.  
Females breed from 4 years, giving birth to  
1–6 cubs after a gestation of 110 days.

**STATUS** Vulnerable.



A magnificent pride male in  
the Maasai Mara. Despite  
their reputation for ferocity,  
lions are wary of humans





Ten minutes later the lioness is out cold. But the anaesthetic, while enough to kill a human, wears off within an hour. In that time, the team have to fit a collar, feel the cat's tummy for any signs of pregnancy, record the colour and condition of her teeth, note her whisker spot patterns, take blood for DNA testing, and notch her ears with a unique code. Finally they give her antibiotics, to ensure no infection is introduced during immobilisation, and observe her from a distance, to ensure her safe return to consciousness.

Alayne has now joined the organisation Ewaso Lions, which works to help people and lions co-exist across the Ewaso–Nyiro ecosystem, from the Laikipia plateau to the Samburu and Shaba reserves further north. This is a wild country of ancient lava flows, granite bluffs and grasslands scattered with desert rose, where Grévy's zebra gather by the rivers and wild fig trees line the banks. Lions still exist outside protected areas and livestock husbandry is the lifeblood of the local economy – a potential tinderbox.

Human-induced fear in lions is evident at Ewaso–Nyiro. Here the cats move faster, rest less and feed on their kill for shorter periods to reduce the chances of being detected – and possibly killed – by humans. As these lions frequently need to hide from people, they tend to live in tiny prides of only two or three members, unlike the groups of 20 or more lions that are found elsewhere. And, unusually for such a social cat, females often raise cubs alone.

Conservationists have traditionally sought to protect larger lion populations. But Alayne believes that we must also maintain connectivity between the smaller breeding populations dotted over a wide area. One of her embryonic projects with Ewaso Lions is to collar dispersing cats (those that leave their pride and temporarily become nomadic) as this will enable her to plot the main corridors for lions. The organisation can then target its resources to nurture tolerance to lions where it is most needed.

### Hearts and mind

"It's vital to change the attitudes of local people whose livelihoods are threatened by lions," Alayne explains. Tourism is among Kenya's most important sources of foreign currency and lions are one of the country's main draws. When safari operators start to fund big cat conservation projects, the link between lions and tourism revenue is immediately more visible.

"Tourists can see where their conservation fees go and the Samburu people can see where they come from. All of which favours lions," says Alex Edwards, founder of the safari operator Natural High.

Ewaso Lions has also recruited Samburu moran, or 'warriors'. Jeneria Lekilele, a senior field officer for the charity, recalls that when he was a child killing a lion was a rite of passage for a Samburu boy. But today the moran

**"If the tagged lions move near cattle, the shepherd is alerted. The cattle are safe, and the lions stay alive"**



If we can't save the lion, what hope is there for less charismatic species? "It is inconceivable to imagine Africa without lions," says Will Travers of the Born Free Foundation



## Living walls: Keeping the predators out

To the south of Kenya in Tanzania, the African People and Wildlife Fund has launched another grass-roots project to help save lions. Living Walls tackles a key problem in the northern Maasai Steppe – 20,000km<sup>2</sup> of grassland, acacia woodland and bush home to the most threatened lion population in the country. Here the Maasai tribe keep their cattle overnight in bomas (acacia-thorn enclosures), but these are easily penetrated by lions, which are killed in retaliation.

The solution is a new design of predator-proof boma made from a local tree, *Commiphora africana*, which resists drought, fire and termites. The growing branches are woven through chain-link fencing. More than 350 Living Walls are now in place – and so far all have been successful in eliminating lion attacks.



Living Walls keep cattle and lions apart

work as lion ambassadors in their villages, calming tensions and persuading the residents of the cats' value.

Naming each lion helps. "When we personalise lions, it is less likely that herdsman will kill them," smiles Jeneria. One lioness was called Magilani, or 'clever one'. She was monitored for years and locals even discussed her progress in community meetings. Then she got injured. "When word spread that Magilani was hurt, a group of Samburu elders offered her a cow to eat, to help with her recovery," says Jeneria. "For Samburu pastoralists, who often lose livestock to lions, it was just remarkable."

### People power

Magilani's story is testament to the power of working with local communities. "It is simply impossible to overstate their influence," agrees Will Travers. The Borana ranch is also a stellar example of how steps can be taken to ensure lions and cattle both thrive – since collaring began, livestock losses have plummeted by over 93 per cent.

Alayne fervently believes that if people in rural Africa can discover ways of living with lions such as Magilani, then they can live with any animal. "People power has to be the answer. In the end, the future for wildlife in Africa comes down to co-existence with people."

**JOANNA EEDE** is a writer who works for the human-rights charity Survival International ([www.survivalinternational.org](http://www.survivalinternational.org)).

**"Killing a lion was a rite of passage for a Samburu boy. But today the warriors work as lion ambassadors"**

### FIND OUT MORE

Discover more about African lion conservation at <http://ewasolions.org>, [www.bornfree.org.uk](http://www.bornfree.org.uk) and <http://afrpw.org>